

# 4

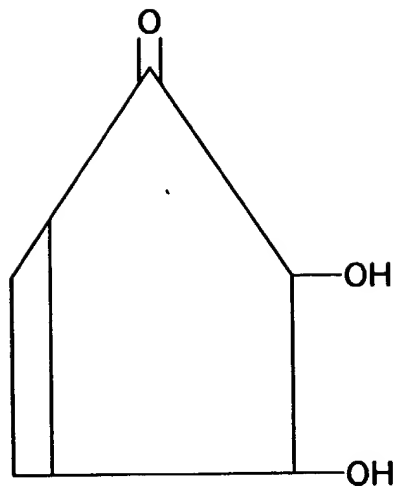


FIG. 1

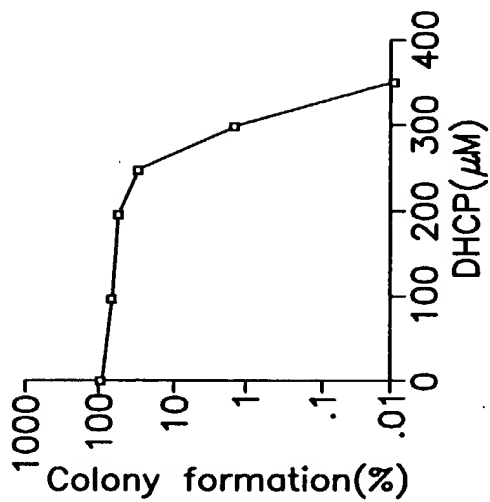


FIG. 2B

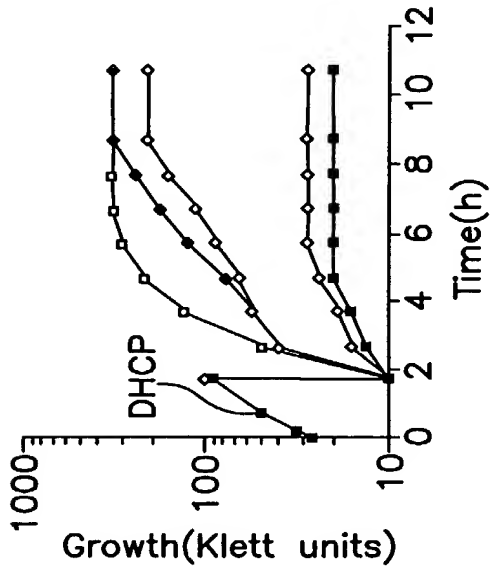


FIG. 2A

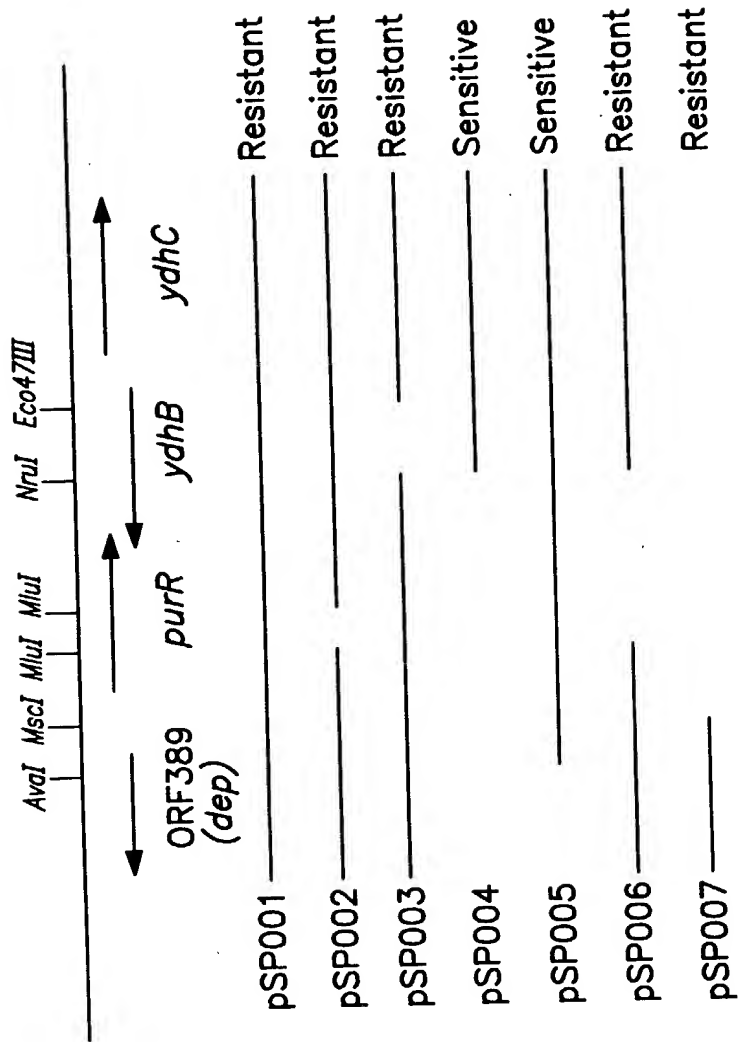


FIG. 3

Dep 1 ---MKINPELLALALGAFGIGTSPMLGLPIARQDVDSIPAGGLISAYAVGVAVGAPLALILLSHRRARRSALIFLMAIFLGL  
Cmr 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
CmrA 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
Cml 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
Cmx 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
CmlV 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
BcR 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
Bmr3 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
Yjcc 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV  
Tet 1 ---PFAVYVLEIFVFAVGTSEMLSGILBODQVSHETACGLSARAGLGLGAPLPA SMWORRALTFITMIV

## III

Dep 84 ---MVLISATAPDYMTMISRIILTSLNHGAFFGLGSVVAASVVPKHKQSAVATMFLGLTANICGVPAATWLGETIGMVSFLATGLGVISVLSLFLSPKCGACAR  
Cmr 82 ---HVGCHTDSF.GVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
CmrA 82 ---HVGCHTDSF.EVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
Cml 82 ---HVGCHTDSF.PVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
Cmx 82 ---HVGCHTDSF.SLLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
CmlV 106 ---HVGCHTDSF.AVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
BcR 89 ---HVGCHTDSF.AVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
Bmr3 91 ---HVGCHTDSF.AVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
Yjcc 105 ---HVGCHTDSF.AVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD  
Tet 93 ---HVGCHTDSF.AVLETRITICANANETLWALGAMMSVUPADMKRNTLILGEMHACVGVPEALGELKMGRASENEVLSAPPAAMASTP.....ADSPD

Dep 189 ---P...EVKELAVLMEPQVLSALITVILGAGAMITLY...IVLSPV...LOSITHATPFVVTAMLVILIEVGFSGN...VLGKRLADRSVGT...JLGGKLLILLVIL  
Cmr 186 ---SVP...NATBELSIRQKQLILILGLINGATCS...TVLEPT...LTDAGFSR...PLILGLGSGFICV...SFGGLADTRPQL...JLGSALVGM  
CmrA 186 ---SVP...NATBELSIRQKQLILILGLINGATCS...TVLEPT...LTDAGFSR...PLILGLGSGFICV...SFGGLADTRPQL...JLGSALVGM  
Cml 189 ---GCF...PVELAKTERILILILGLINGATCS...TVLEPT...LTDAGFSR...PLILGLGSGFICV...SFGGLADTRPQL...JLGSALVGM  
Cmx 191 ---SFP...RVELAKTERILILILGLINGATCS...TVLEPT...LTDAGFSR...PLILGLGSGFICV...SFGGLADTRPQL...JLGSALVGM  
CmlV 214 ---P...KNEVAYDROVILAVLELGLINGATCS...TVLEPT...LTDAGFSR...PLILGLGSGFICV...SFGGLADTRPQL...JLGSALVGM  
BcR 198 ---H...IRITG.NFALFHKRILYLASGFAGMFSLS..AGFYVYIEIETHAPENFGY...FALNIV..F...FVMTFNSRFRVGLN..F..RSGMVF  
Bmr3 195 ---K...QXLMG.GAITL...V...CL...MFA..L...E...GGKTY.DMSIOII..GLF...VFA..V..FF...IAF..VE..K...E..ISFW..F..KNEFATAQ  
Yjcc 209 ---S...QKF...P...CAS...LFA..LW..H..G...GQAHGSTSIPIIEEAVA...JLGL...F...VW...QSSH..RP..L..VDF..R..SFFSISA  
Tet 202 ---KGIILMSGIVFFLETTYSIIFLIVSILFLVAKHVKVTDVFDPCGXNIPFMIGVCGFGFVGFVSNVPMKDVHQTATGGSVIFPGHISFGY

Dep 282 ---ALPFLARFEGRAISVWNG...RATFAVVP...QMRVAVASAPC...LSSSVNIGAFNLGNALNAGGAVI...SAGICYSFVP...NGAIVAGLALLLVHNSRKKQFETV  
Cmr 281 ---VFAITASHPVVILM.FVQG...TLFEVAGSTISRVVADCAPT...LGSFATFATN.GAALGPALGGVAGI...IGRA..AP..WTSAA..V..LA..GAA..WT..WEPR  
CmrA 281 ---VFAITASHPVVILM.FVQG...TLFEVAGSTISRVVADCAPT...LGSFATFATN.GAALGPALGGVAGI...IGRA..AP..WTSAA..V..LA..GAA..WT..WEPR  
Cml 284 ---ALAMADRPVLLTLFVQG...ALFEVAGSTITRVYEA.GAPT...ZGSVATFALN.GAAGPLV..T...GHT..NLG...E..WAS..V..ALL..MPPFTVIT..TA  
Cmx 285 ---VAVASHPVVILM.FVQG...FLFEVAGSTITRVYEA.GAPT...ZGSVATFALN.GAAGPLV..T...GHT..NLG...E..WAS..V..ALL..MPPFTVIT..TA  
CmlV 306 ---ALAFSPNPA..LTLF..VFEYFAPAPAFVAFNAGAPT...LGSFATFATN.GAALGPALGGVAGI...IGRA..AP..WTSAA..V..LA..GAA..WT..WEPR  
BcR 292 ---MAA..V...I..AL..GLEFW..L..VUC..AAVGC..SMASHM..V..IDEPRHGTASSLA...T...F...GIG..I..MUSLA..FN..SAMP.  
Bmr3 272 ---I..LAFV...E..TF..L...FI...PIFVOAGYSGITAGFL..P...H..SVFGM..G..IF..QTKAS...FN...LM...V..APF..GM..LIS..MTP.  
Yjcc 284 ---ITAFEL...AF..I..VO..M..I..EVA..PFL..QK..GFDVINTGELI..PWP..AF..PIAGRI..DRIPAG...ILG...GIG..IL..G..G..VIS..VLPP.

FIG. 4

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312  IGGIIVDRRVPYALNIGVTFLVSELTASLTLETTSWFMIIIVTLGGESFTKTVSTISSLKQOEAGAGMIDNSESISPTCTCAIISGGLISIPLLDPRLLP
Dep 385  CVANS-----
Cmr 384  PALPVP-----
CmrA 384  SQPVP-----
Cml 386  APAPSTR-----
Cmx 388  ABA-----
CmlV 409  PGHVVARSGAGGTPSEPARGKATSC-----
Bcr 372  ....MIW...SIAPCATS...SILFCLYASRPKKR-----
Bmr3 354  ...PQARVM...LTVFM...ISGFGVGFNSLL.P..AASNDLEPRFR.GTANSTNSFLRSFGMTLGVTFGTQNTNFKLNDAFSGMK.G..SAGSGA.AQNIQDPQE
YjcC 366  ...KPKPI...IAVINMALCG.G.GFGFFLS.PNORALMSS.APTTRSGAASGVLGIRILGOTTGATL...VAFCLYLSDDHGAIEIALRIGIFIAFAGLYGQFVAFAE.
Tet 421  PVDQSTLYLSNLLLLFSGIIVISWLVTLNLYKHSORDF-----

390  -----
Cmr 392  -----
CmrA 392  -----
Cml 393  -----
Cmx 392  -----
CmlV 437  -----
Bcr 397  -----
Bmr3 450  IFQAGTRSQIPDAILNRIIDAMSSITY.VFLALIPIVLAAVTILFMGKARVKTTAEMTKKAN
YjcC 462  ...KADFKKK.P..LLVRLYSRIKNVPSYLIF-----
Tet 459  -----

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FIG. 4 (cont.)

FIG. 5A

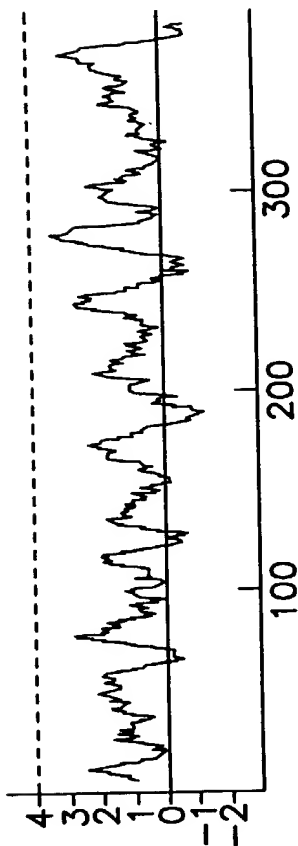


FIG. 5B

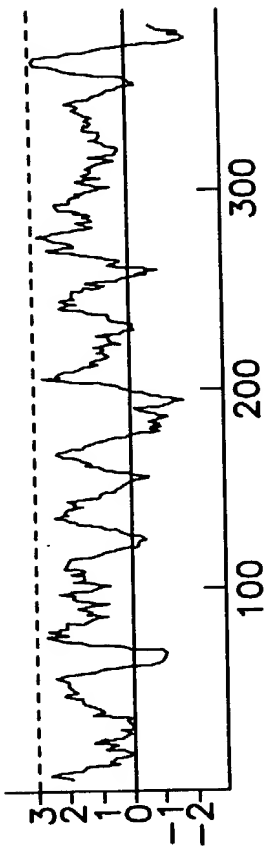
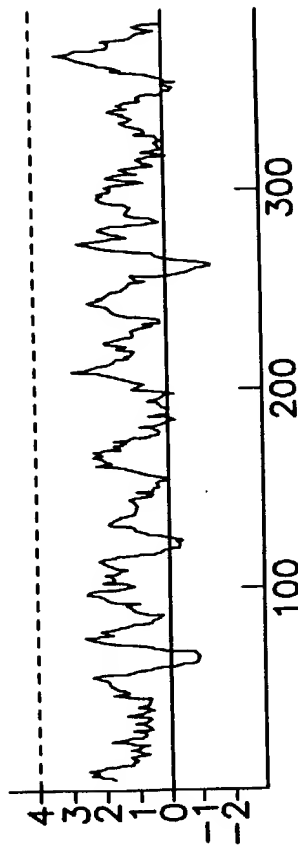


FIG. 5C



4381 gccagccact cttccagctg acgcacggta tagctgaccg cagaaggaaac gcgatgcagc  
 4441 tccgtgtgcc cagcgctaaa actaccatta cgcgctaccg catcaacaac ttcgagtga  
 4501 tattctgacc acatagtctg cctgcaaaat ttttgaaacc agtcatcaaa tattaccgtt  
 4561 tcacaacact aatttcaact cctacacttt gcggcgggtg ttaattgaga gatttagaga  
 4621 atatacatgc aacctgggaa aagattttta gtctggctgg cgggtttgag cgtactcggg  
 4681 tttctggcaa ccgatatgta tctgcctgct ttcgccgcca tacaggccga cctgcaaacg  
 4741 cctgcgtctg ctgtcagtg cagccttagt ctgttccttg cgggttttgc cgcagcccag  
 4801 cttctgtggg ggccgctctc cgaccgttat ggtcgtaaac cgggtattat aatcggcctg  
 4861 acaatttttg cgttaggtag tctggggatg ctgtgggtag aaaacgccgc tacgtgctg  
 4921 gtattgcgtt ttgtacaggc tgtgggtgtc tgcgcgcgg cggttatctg gcaagcatta  
 4981 gtgacagatt attatccttc acagaaagtt aaccgtattt ttgcggccat catgcgctg  
 5041 gtgggtctat ctccggcact ggctcctctg ttaggaagct ggctgctggt ccatttttcc  
 5101 tggcaggcga ttttcgccac cctgtttgcc attaccgtgg tgcgtattct gcctattttc  
 5161 tggctcaaac ccacgcagaa ggcccgtaac aatagtcagg atggtctgac ctttaccgac  
 5221 ctgctacgtt ctaaaaccta tcgcggaac gtgctgatat acgcagcctg ttcagccagt  
 5281 ttttttgcac ggctgaccgg ttcaccgttc atccttagtg aaatgggcta cagcccggca  
 5341 gttattgggt taagtattgt cccgcaaaat atcgcgtttc tgattggtgg ttatggctgt  
 5401 cgcgcgcgcg tgcagaaatg gcaaggcaag cagttattac cgtggttget ggtgctggtt  
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 5581 gccaggcgcg tgcgtccctt cccacacgca actggctcgc cgcagcgtt gcagaacact  
 5641 cttcaactgg gtctgtgctt cctcgcaagt ctggtagttt cctggctgat cagtatcagc  
 5701 acgccattgc tcaccaccac cagcgtgatg ttatcaacag taatgctggt cgcgctgggt  
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 5821 catagcgaat cacactgacc tatatcgata tacttatact taggctgcta acaaaatttt  
 5881 gttgtatgat tgaaattagc ggcctatact aatttcgagt tgtaaagct acgataaata  
 5941 ttatgttttt acggggacag gatcgttccc gactcactat ggatagtcac ttcggcaagg  
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 6121 gagaaactat gagttcatcg tgtatagaag aagtcagtgt accggatgac aactggtaac  
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 6241 atattcgtgt gaaaaacccc gattttttta aacgcgttct gcaagaaggc tctttggggt  
 6301 taggcgaaag ttatatggat ggctgggtgg aatgtgaccg actggatatg ttttttagca  
 6361 aagtccttac cgcaggtctc gagaaccaac tccccatca tttcaaagac acgctgcgta  
 6421 ttgcccggcg tcgtctcttc aatctgcaga gtaaaaaacg tgcctggata gtcggcaag  
 6481 agcattacga tttgggtaat gacttggtca gccgcatgct tgatcccttc atgcaatatt  
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 6961 atccctggat taataaatat atttttccga acggttgctt gccctctgta cgcagattg  
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 7081 atactacgtt gatggcgtgg tatgaacgat tcctcgccgc atggccagaa attgccgata  
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 7381 tctaccactg cctgagtttg tggatcgatt tcaatgttga cgcgtgccc aagtttttcc  
 7441 ttcccaagag cgtgcgcttc cagtgtttcc ggaattaaat ggacgcaaaa acgcgttgcc  
 7501 gtgacttcgc cgacggtcag gctaataccg tcgatgccaa taaatccttt gtacagaata  
 7561 tatttcatca actgactatc ctggacttta aaccagatct ggcgattatt ttctgaggtt  
 7621 aatatttttc ccaacttcagc agtggtcata atatgacctg acattaagtg tccgccaatt  
 7681 tcatcactga atttcgccc acgctcaacg tttacccaat cccccacttt taaatcgcca  
 7741 agattggtaa tgcgtaacgt ttctttcatc aggtcaaaaac tgacatggtt gccgttaatt

FIG. 6A

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7801 tccgtcacgg tcaggcagca accggttatgc gccacggaag caccgggttcc caggccgtcc
7861 agcatgtggt cgggtaactc caccacatgc gtacgaaaat ttgggtttctc gtcaatcgac
7921 accagttttg cgggtgccctg tacaatcccc gtaaacatac ttacaactcc tgaaatcagt
7981 taagacattc tgttcagcac aatagcaggt ggaaaacgcc cttaccagtg aaggggtaag
8041 aatggctatt ttttcaactg agaattaata aatcctcgct acaatagact gaatttcccc
8101 tgcttcttct ttttgctgcc cattcaggcg gctttttagt ctctcatata actacaaata
8161 aaagggtgtc acgtgcagaa gtatatcagt gaagcgcgtc tgttattagc attagcaatc
8221 ccggtgattc tcgcgcgaat gcgccaaact gcgatgggtt ttgtcagtag cgtgatggcg

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FIG. 6B

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[atgc aacctgggaa aagattttta gtctggctgg cgggtttgag cgtactcggt
4681 tttctggcaa ccgatatgta tctgcctgct ttccgcccca tacaggccga] cctgcaaacg
4741 cctgcgtctg ctgtcagtag cagccttagt ctgttccttg ccggttttgc ccgagcccag
4801 cttctgtggg ggccgctctc cgaccgttat ggtcgtaaac cgggtattatt aatcggcctg
4861 acaatttttg cgtaggtag tctggggatg ctgtgggtag aaaacgccgc tacgtgctg
4921 gtattgcgtt ttgtacaggc tgtgggtgtc tgcgcgcggc cggttatctg gcaagcatta
4981 gtgacagatt attatccttc acagaaagt aaccgtattt ttgcggccat catgccctg
5041 gtgggtctat ctccgcact ggctcctctg ttaggaagct ggctgctggt ccatttttcc
5101 tggcaggcga ttttcgccac cctgtttgcc attaccgtgg tgctgattct gcctattttc
5161 tggctcaaac ccacgacgaa ggcccgtaac aatagtcagg atggctctgac cttaccgac
5221 ctgctacgtt ctaaaacctg tcgcggcaac gtgctgatat acgcagcctg ttcagccagt
5281 ttttttgcac ggctgaccgg ttcaccgttc atccttagtg aaatgggcta cagcccggca
5341 gttattgggt taagttagt cccgcaaac atcgcgtttc tgattgggtg ttatggctgt
5401 cgcgcgcgcg tgcagaaatg gcaaggcaag cagttattac cgtggttgct ggtgctgttt
5461 gctgtcagcg tcattgcgac ctgggctgcg ggcttcatta gccatgtgtc gctggtcgaa
5521 atcctgatcc cattctgtgt gatggcgatt gccaatggcg cgatctaccc tattgtgtc
5581 gccagggcgc tgcgtccctt cccacacgca actggctgcg ccgcagcgtt gcagaacact
5641 cttcaactgg gtctgtgctt cctcgcaagt ctggtagttt cctggctgat cagtatcagc
5701 acgccattgc tcaccaccac cagcgtgatg ttatcaacag taatgctggt cgcgctgggt
5761 tacatgatgc aacgttgtga agaagttggc tgccagaatc atggcaatgc cgaagtcgct
5821 catagcgaat cacactga

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FIG. 7